

## **Environmental Protection Agency Environmental Justice Small Grant Work Plan**

### **Project Title and Project Purpose Statement**

**Project Title:** “Empowering Youth Messengers to Reduce Illegal Dumping in Coral Bay, St. John, USVI”

**Project Purpose Statement:** In this project, the Coral Bay Community Council (CBCC) proposes to reduce or totally eliminate the practice of illegal dumping of solid waste in ghuts and bin sites in Coral Bay, St. John, U.S. Virgin Islands 00830 (USVI). The outreach of this project will extend to all the USVI. Ghuts are the ephemeral watercourses found in the USVI which primarily flow during heavy rain events. This stormwater runoff eventually flows into our coastal waters causing potential contamination. Illegal dumping is also a major problem in Coral Bay. Items such as old electronics and appliance can be found around waste bins when they should be taken to the Susannaberg Transfer Station. These items may contain certain chemicals and heavy metals that can leach into nearby soils. This residue eventually ends up in our coastal waters. Because this project targets both solid waste issues and coastal water contamination through education and outreach, the relevant environmental statutes are the *Clean Water Act, Section 104(b) (3)* and the *Solid Waste Disposal Act, Section 8001(a)*. The main tasks of this project are as follows: (1) work with churches/community groups, (2) Perform ghut cleanups, (3) Outreach participation, (4) record a public service announcement (PSA) video, and (5) create handouts and signage. With the accomplishment of these tasks, the following goals or objectives should be achieved: (a) Reduce or eliminate the dumping of solid waste into ghuts, (b) reduce or eliminate illegal dumping around waste bin sites (c) mitigate point and nonpoint source pollution in our coastal waters, (d) effect a change in the community’s behavior in the management and disposal of solid waste, (e) educate the community on the important relationship between the land and sea, and (f) empowering the affected community youth as messengers and activists. By doing this, the public will realize that what happens on the land eventually affects the water.

### **Environmental, Public Health and community climate resiliency information about the affected community**

Coral Bay, on the island of St. John is located about eight miles from the main town of Cruz Bay, on the eastern side of the island. The Coral Bay watershed is over 3,000 terrestrial acres, and most of the land is either steep slope or wetlands. Because of this, an intricate drainage system of ghuts have developed in the watershed that all drain toward the sea.

The community of Coral Bay, St. John, USVI is very small, rural, and somewhat isolated. Its population is 947 residents according to the 2010 Census Report. The population is 20% under 20 years old, and there are many who are middle-aged to old. Average income is considerably below the Virgin Islands as a whole. Per capita personal income averages \$17,528 and ranges from \$16,283 to \$33,111 for all estates in the Coral Bay management area according to the 2010 Census. The USVI per capita personal income is \$21,362 (51.3 percent of US average wages & salaries).

The estimated median income of households in the USVI was \$45,058 in 2010, considerably lower than the US median household income of \$51,144. St John is a non-metropolitan area with a 2010 Census median household income of \$40,644. The average

median income for all the estates that make up Coral Bay was \$25,711 according to the 2010 census. Using these figures, the service area has a NMHI of 63% the St. John NMHI, 57% of the USVI NMHI, and 50% of the US median household income.

In a small, rural community like this one, contact with the outside world is limited. Furthermore, access to services and infrastructure facilities that is taken for granted elsewhere is difficult and not convenient here. In Coral Bay, there is limited bus service, no gas station, no health care facility, no community center and no police station. There are essentially no recreational facilities for children and youth.

People who come from the mainland to live in Coral Bay bring with them a lot of communications and learning skills that allow them to be more easily communicated with about environmental risks and threats. Those who were born here or came from other Caribbean islands and have low incomes do not have these advantages, and therefore are less likely to know about the environmental consequences of illegal disposal of various household wastes: from waste oil reaching the bay waters to creating breeding grounds for disease-bearing mosquitos. **This segment of the population is known as “West Indian” and is the target “affected community” for the grant.** A West Indian is someone who is of African descent that is born in the Caribbean.

To communicate with the full age range of the affected community on these environmental and public health issues mentioned above, it has been decided to focus CBCC effort under the grant on empowering the youth groups at the two local churches to engage in building awareness messages and sharing them. (This will also have positive benefits to the self-esteem and character-building for the youth involved.)

The typical West Indian youth’s situation in Coral Bay may be like this: He/she lives in a single parent household being raised by their mother. The income of the household may be close to or below the poverty level. This means that they may not have access to Cable TV, computers, or the internet because their parent(s) cannot afford it. Three or more generations may live in the home. Educational facilities are far away, and local recreational facilities are virtually nonexistent. These youth need something to keep them occupied, stimulated, and develop goals that are worth fighting for. **Therefore, the CBCC proposes to reach out to these youth to show them how they can be engaged and empowered to undertake activities to improve the environment around them, and also become messengers to the larger community about stopping improper and illegal dumping of waste.**

The community of Coral Bay has various issues pertaining to solid waste and clean water. Proper management and disposal of solid waste is a problem. First, there is no residential waste pickup in Coral Bay. The only means of waste disposal are eight (8) waste bins in various parts of the area. Illegally dumped items such as appliances, furniture, mattresses, bed frames, used motor oil, yard waste, and construction debris are all supposed to be taken to the Susannaberg Transfer Station (STS). However, many residents in Coral Bay may not have a vehicle to transport these items to Susannaberg. Moreover, other residents find it easier to leave their illegally dumped items by the waste bins or in area ghuts instead of taking the drive over rugged and hilly terrain to STS. As a result, there is the issue of illegal dumping.

As was stated earlier, a ghut drainage system has developed over Coral Bay because of the topography. Thus, everything flows from the land to the sea. With the existing solid waste management and disposal problems, the practice of dumping waste into ghuts has developed. Not only is solid waste dumped into ghuts but there is also the problem of leaking oil and dumping of oil into ghuts. This oil seeps into the soil, and thus ends up in the groundwater

supply and eventually into the ocean. Contamination of land and marine water sources results. Plastic is a large portion of USVI waste stream which includes Coral Bay according to the 2009 USVI Waste Characterization Study. Many plastics being dumped are bottles and other containers. These can eventually fill with water in a heavy rain event, and thus cause increase breeding of mosquitoes. The increase in the mosquito population can lead to greater incidences of dengue fever and chikungunya. Therefore, a public health issue occurs.

The local environmental issues this project seeks to address are: (1) dumping of solid waste into ghuts, (2) illegal dumping at waste bin sites, and (3) contamination of coastal water and marine life from solid waste leachate. The public health issues this project seeks to address are: (a) the potential breeding grounds for mosquitoes in solid waste which hold rainwater, and (b) the potential for contamination of groundwater from solid waste chemicals and heavy metal residue.

If these issues are not properly addressed, then many negative impacts would result. Coral Bay's main industry is tourism. If tourists continue to see illegally dumped items at bin sites, and solid waste entering into the area's coastal waters, this may decrease the amount of tourists visiting Coral Bay, thus negatively affecting the area's main economic activity. This could lead to decreases in income and potential loss of jobs. The Coral Bay population consists mainly of the very young and the middle-aged to old (2010 Census results). Any type of disease outbreak from mosquito-borne illnesses will severely debilitate the population. In addition, there are no emergency health care facilities in Coral Bay in case of medical emergencies. Thus, Coral Bay is a community that is very vulnerable to these environmental and public-health issues. Prevention is the best solution.

Through our education and outreach efforts, the following results are anticipated: (i) reduction in the amount of solid waste in ghuts, (ii) reduction in the amount of illegally dumped items at waste bin sites, (iii) prevention of contamination of the coastal waters due to solid waste and its leachates, (iv) prevention of ground water contamination, (v) reduction in breeding areas for mosquitoes and thus a reduction in the mosquito population, (vi) a reduction in the number of cases of mosquito-borne diseases in Coral Bay, (vii) having a community that is more knowledgeable about the relationship between the land and sea, (viii) effecting a change in the community's behavior about the management and disposal of solid waste, and (ix) empowering and educating youth who often feel "left out" of the world around them.

Coral Bay would benefit from the results of this project in the following ways:

- Youth groups that are ready to engage as volunteers for the larger community
- There would be an improvement in the management and disposal of solid waste
- There should be an improvement in water quality, both terrestrial and marine
- An improvement in overall public health and quality of life
- Would have a more environmentally sensitive and knowledgeable community

### **Organization's Historical Connection to the Affected Community**

In 2003, CBCC was founded as a volunteer-initiated, 501(c)(3) nonprofit organization to provide all residents with a means of participating in planning the future of Coral Bay development, including land and water use planning, infrastructure, and environmental issues ([www.coralbaycommunitycouncil.org](http://www.coralbaycommunitycouncil.org)). The initial board of directors was intentionally selected to reflect the community's diversity and help empower those who felt the Virgin Islands government completely ignored the remote community – never spending funds or staff time for

essential services and infrastructure (police presence, roads) or environmental enforcement of all kinds. The founders included native borne West Indian activists as well as a trained community advocacy planner, Sharon Coldren. CBCC immediately became an advocate and focal point for effectively clamoring for these services. CBCC held monthly forums to bring government and infrastructure leaders to hear local people's concerns. Environmental researchers and advocates also made presentations and encouraged resident involvement in stormwater management, better building practices, protecting mangroves, drinking water treatment (collected in rainwater cisterns – no public water supply) and more. CBCC has been seen as a potent force to encourage environmental and infrastructure improvements and give effective voice to local concerns.

Community Visioning focus groups were held in 2004-5, followed up by collective mark-up sessions in 2006 where key points were agreed upon. Territorial government resistance to formal planning activities prevented completion of this effort, with official backing. So in 2013, CBCC wrote and received a grant of services from the American Institute of Architects (AIA) to hold a workshop and write up a plan for Coral Bay. Exceptional efforts were made to engage all diverse members of the community, and were successful and the Sustainable Development Plan report reflects this: <http://www.coralbaycommunitycouncil.org/aiab099987-final-report-1-2014.pdf> .

A Community Vision survey was also conducted and showed highly shared values: <http://sdrv.mx/ZcpE5a> , especially in protecting the environment and appreciating living outdoors in Nature in Coral Bay. Yet there is a continuing lack of awareness of the damage that solid waste and litter thrown in ghuts can create for the environment or how this deteriorates the larger environment. Further – the awareness that one's own actions can be responsible for improvements is also sometimes lacking in the affected population. (For instance: Being aware that an individual or a group can be part of cleaning up litter routinely and prevent litter from happening – and that is not someone else's problem.)

## **Project Description**

### *Project Goals:*

1. Reduce or eliminate dumping of solid waste and motor oil into ghuts in Coral Bay
2. Reduce or eliminate illegal dumping around waste bin sites
3. Prevention of solid waste and its residue entering into groundwater and coastal waters causing contamination
4. Having an empowered and informed affected community (in regards to proper solid waste management and disposal, and knowing the intimate relationship between the land and the sea) that will continue with environmental projects after the grant period.

### *Project Objectives:*

1. Develop partnerships with churches and church youth groups
2. Hold ghut cleanups
3. Participate in outreach events
4. Record PSA video
5. Create signs and distribute handouts

Solid waste management and water quality have been two issues of concern to the Coral Bay community. The overall goal in both cases is to reduce the amount of solid waste generated and improve the water quality of the bay respectively. However, in addressing these issues, other problems can be overlooked. The dumping of solid waste into ghuts and illegal dumping at waste bin sites are also problematic. With chemicals leaching into nearby soils from illegally dumped items, and waste flowing from ghuts into the ocean, water quality of the coastal waters are also impaired. These are very preventable situations. Therefore, the CBCC proposes to address these issues through education, outreach, working with the local churches, their youth groups, and the community. The tasks to be performed for this project are described in detail below:

*Task 1 - Develop partnerships with churches and church youth groups.* To begin its education and outreach efforts, CBCC will develop partnerships and collaborations with two local churches and their respective youth groups. This will begin in September 2015. We have gotten a letter of support from the Calvary Baptist Church. Their letter of support will be attached to the remainder of this application. The Pastor of the Emmaus Moravian Church has pledged his support of the project in a phone conversation. Their youth group has been meeting and dialoguing about their participation in this project. Although we want participation from the entire membership of each church, our primary targets are the youth groups of each church. The youth in Coral Bay do not have many activities to be involved with, and are primarily not attached to any cause. Some of them are straying in the wrong path. Moreover, they do not have much of a voice in the community. This project is a perfect opportunity to address these concerns. In addition, this is a good way for high-school aged youth to gain community service hours to fulfill their requirements for graduation. By engaging and empowering the youth, we hope to also capture the attention of their parents and the entire community in addressing these environmental and public health issues.

*Task 2 – Perform Ghut Cleanups.* To directly address the issue of ghut dumping, CBCC will host three (3) ghut cleanups in the Coral Bay area. These will be held on October 2015, February 2016, and June 2016. By doing it during this time period, debris and waste can be collected during and after the hurricane season. Two churches, the Calvary Baptist Church and the Emmaus Moravian Church have pledged their support in being a part of these cleanups, primarily through their youth groups. Also residents, CBCC staff, and volunteers will participate in these cleanups. Small and medium-sized debris and solid waste from the ghuts will be removed. Larger debris and waste will be brought to the attention of the Department of Public Works. One ghut known for dumping will be targeted as well as any other suggested by residents, church groups, volunteers or staff.

*Task 3 – Outreach participation.* CBCC will participate in three (3) larger outreach events, hosted by other organizations. These events will take place in December 2015, April 2016, and the July 2016. (Earth Day, Local Bazaar, Environmental Camp or other). This is an opportunity to get the message out on the project and the environmental issues that it addresses. These will be events that are environmentally youth-centered in focus which keeps with our theme of reaching out to the youth. In doing this, a larger audience can be targeted. In addition, media outreach will take place in the form of press releases, articles, and other messages. It is intended that the partner youth groups will be among the active presenters.

Task 4 – *Record Video PSA*. CBCC proposes to record a PSA video with the youth. This video will primarily be done by the youth from the church groups. A video instructor will be brought in to teach the youth about essential video recording techniques. CBCC’s Environmental Programs Associate will also assist the youth in the preparation of the video. The times for this task to take place will be the initial preparation in November 2015, the follow-up in January 2016, and the final editing and recording will be done in May 2016. The intent for recording this video is to have the message about the effects of illegal dumping to be brought to an even wider audience, reaching eventually to all of the USVI. Illegal dumping is not only a problem in Coral Bay but in all of the USVI. The video may be taken to one of the local TV stations to be aired. Also, if the youth so desire, they may have the video uploaded to some form of social media or YouTube. As an incentive to them, the youth would also be encouraged to enter the video in a video contest. In doing so, this will encourage them to possibly make future videos to continue to spread the message about illegal dumping and its negative effects.

Task 5 - *Create and distribute handouts and signage*. CBCC proposes to create as well as distribute handouts and signs in the Coral Bay area where illegal dumping is known to take place. These activities will primarily be youth-driven, with CBCC staff leading out. Handouts will be given primarily during the outreach events. Signage will also be developed by the youth with general oversight by CBCC staff. Youths will be able to express their creativity and talents in creating the signs. Stencil equipment will be purchased in order for the youth to create their signs about illegal dumping and water contamination.

Task 6 – *Environmental Justice Workshop Attendance*. In the fall of 2015, EPA will hold a two-day training workshop tentatively held at EPA headquarters in Washington, D.C. Attendance at the workshop is mandatory. The purpose of this workshop is to help award recipients with grant management and strategic planning. The workshop will also be an opportunity for award recipients to network with other community representatives and stakeholders. The Project Manager will be the one assigned to attend this workshop.

Task 7 – *Project Management*. CBCC’s Environmental Programs Associate will complete all project scheduling, coordination, management, budgeting, and reporting for this project. This will be done throughout the duration of the project from September 2015 to August 2016.

### **Organizational Capacity and Programmatic Capability**

The Coral Bay Community Council is an 11-year-old 501(c) (3) nonprofit organization in Coral Bay St. John. It is in good standing with the Lt. Governor’s office, and holds a negotiated federal government indirect cost recovery rate, having participated in federal grants with EPA, NOAA, USDA, and the National Fish and Wildlife Foundation in the past three years. CBCC’s annual expenditures are between \$90,000 and \$200,000. A pro bono CPA reviews our annual books, and makes year-end adjustments. All financials are done on QuickBooks, and all federal rules are followed closely.

CBCC has a large website at <http://coralbaycommunitycouncil.org/> which includes the mission, financials and information on CBCC and its projects. CBCC has always been interesting in planning for the future of Coral Bay, and building the information assets for a comprehensive community plan, based on residents’ values and desires for the future. To this

end, CBCC has been involved in a number of environmental conservation and management projects, supports the local school and afterschool programs, and has been working to implement the goal of incorporating historic preservation into the overall community planning effort. From the beginning of CBCC, the most widely-held concern was the need to address threats, such as sedimentation, solid waste, and marine debris, to the beautiful blue waters and important marine nursery habitat in Coral Bay. After first soliciting help from DPNR, CBCC approached the NOAA and EPA for assistance. In 2007, NOAA funded the Coral Bay Watershed Management Plan (WMP) as a DPNR pilot watershed plan. CBCC then applied for a \$300,000 EPA CARE grant in 2008 to carry out the objectives in the WMP, resulting in the Coral Bay Watershed Management project (<http://coralbaycommunitycouncil.org/Watershed-Management-project.htm>). The CARE grant enabled the community to initiate innovative solutions and leverage monies from numerous partners and stakeholders to carry out the watershed plan.

The EPA CARE grant was undertaken from 2009 to 2011, all objectives and reporting requirements were met or exceeded. The grant officer was Jim Casey, was the project officer. RE: 97239508. Judith Enck visited the project.

In 2009, working with a local nonprofit lead partner, the **Virgin Islands Resource Conservation and Development Council**, CBCC was part of a \$1.5 million NOAA-ARRA grant to restore natural drainage functions and pave roads in order to eliminate or reduce the sediment-laden stormwater runoff plumes entering the bay. This work was completed in 2011. CBCC received a grant from the University of the Virgin Islands (UVI) in 2011 to develop and implement a targeted public awareness campaign addressing the impacts of climate change, dengue fever, and ciguatera fish poisoning on public health. As part of this project CBCC provided a presentation ([link](#)) and brochures ([dengue link](#), [ciguatera link](#)) on these illnesses to St. John schools and churches in Spring 2012. Aspects of climate change (more intense rainfall, warmer temperatures, and increased sea surface temperatures) may result in an increase in the incidence of dengue fever and ciguatera fish poisoning in the Virgin Islands. Other grants have been completed in the interim, and can be seen at our website.

In 2013, CBCC received a \$45,755 grant from the National Fish and Wildlife Foundation Coral Reef Conservation Fund and its funding partner, NOAA, to update the existing Coral Bay Watershed Management Plan, published in 2008, using the U.S. Environmental Protection Agency's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*. The grant commits CBCC to a one-to-one match of in-kind funds, including volunteer services, donations, and partner activities, for a project with a total effort of close to \$92,000. The AIA grant is discussed in the second section above.

For 2013-2015, CBCC has received grants totaling \$262,000 from the U.S. Department of Agriculture (USDA) for solid waste, wastewater, and water supply planning, as part of CBCC's overall Watershed Management Project. One project is a planning activity designed to analyze the management of solid waste in Coral Bay and investigate the effects using dumpsters has on Coral Bay's shoreline mangrove and water resources. The project will provide a plan describing Coral Bay's current solid waste management practices and outlining options for managing solid waste in an integrated manner in the future.

### **Qualifications of the Project Manager (PM)**



The manager for this project is CBCC's Environmental Programs Associate Sean Richardson. Mr. Richardson's background is in marine and environmental science as well as ecology. He is currently responsible for the NOAA Marine Debris Project in Coral Harbor, St. John as well as the USDA Solid Waste Grant Project for Coral Bay, St. John. He is very knowledgeable of environmental conditions in the Virgin Islands. His work has include field surveys and research, literature research, and analysis. He is born and raised on St. Thomas, so he has an intimate knowledge of the Virgin Islands community. Mr. Richardson has always had a passion for educating the community about the different environmental issues in the VI.

The CBCC Executive Director Sharon Coldren, will provide general oversight of the project according to her role as CBCC President and Executive Director. Ms. Coldren has spent over thirty years providing planning, management, financial and regulatory analysis, complex issues analysis, project management and leadership skills to various businesses and nonprofit organizations. She is well known in the affected community and will be involved in a volunteer basis on encouraging this project's outcomes, as she is on all CBCC's successful projects.

### **Past Performance in Reporting on Outputs and Outcomes**

1. A. National Fish and Wildlife Foundation Five Star Restoration Grant #27846;  
B. Riparian Restoration and Wetlands Protection in Coral Bay, St. John;  
C. \$20,464 funded, over \$23,000 in matching funds;  
D. National Fish and Wildlife Foundation and Environmental Protection Agency;  
E. Dean Economides, Grant Administrator, NFWF, 202-857-0166 and Patricia Reed, CBCC Environmental Projects Manager, 340-776-2099
2. A. National Fish and Wildlife Foundation Coral Reef Conservation Fund Grant #30969; B. Coral Bay Revised & Expanded Watershed Management Plan (VI);  
C. \$45,754.94 funded, \$77,458.02 in matching funds;  
D. National Fish and Wildlife Foundation and National Oceanic and Atmospheric Administration;  
E. Rachael Downey, Grant Administrator, NFWF, 202-857-0166 and Patricia Reed, CBCC Environmental Projects Manager, 340-776-2099
3. A. Memorandum of Agreement as part of National Institute for Minority Health and Health Disparities project number #P20MD002286;  
B. A Collaborative Response to Public Health Challenges Linked to Climate Change Impacts in the Virgin Islands and the Caribbean: Implementation of Mobilization Campaigns;  
C. \$5,000;  
D. University of the Virgin Islands;  
E. Dr. LaVerne Ragster, 340-693-1336 and Patricia Reed CBCC Environmental Projects Manager, 340-776-2099

Each grant has specific requirements for documenting output and outcome progress. CBCC has always completed all requirements necessary for documenting and reporting on progress.



1. National Fish and Wildlife grants – each payment request for required CBCC to provide a summary of project accomplishments to date, and progress towards meeting matching contribution requirements. Additionally, a final report detailing project activities and outcomes and explaining discrepancies between the activities conducted and those agreed upon in the grant agreement, a description of and quantification of progress towards achieving project outcomes and explaining any discrepancies; information on unexpected outcomes; a description of key lessons learned; a description of dissemination of lessons learned and project results; and a list of project documents. Additionally, CBCC was required to complete an online form documenting conservation activities, progress measures, and their value at grant completion.
2. UVI Funding – a final report describing all grant activities, budgeting, outcomes/results, evaluation/feedback, challenges, and including all grant documents was provided to UVI at the end of the project.

In all of its projects, CBCC has made progress towards achieving the expected outputs and outcomes. However, in some cases due to circumstances outside of CBCC's control, such as with tropical rainy seasons that preclude turbidity monitoring, CBCC had to alter the scope of its expectations. Any deviations are noted in the final project report.

### **Quality Assurance Project Plan (QAPP) Information**

This project will not require a Quality Assurance Project Plan (QAPP) since no environmental data will be used or collected. This project will be strictly dedicated to education and outreach.